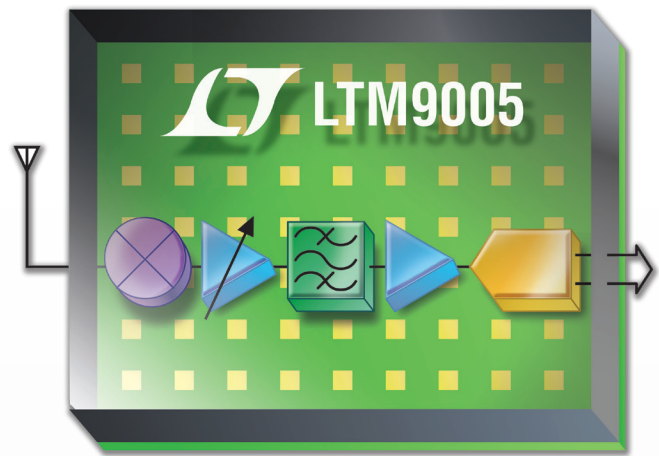


# RF-to-Digital $\mu$ Module Receivers



Direct Conversion



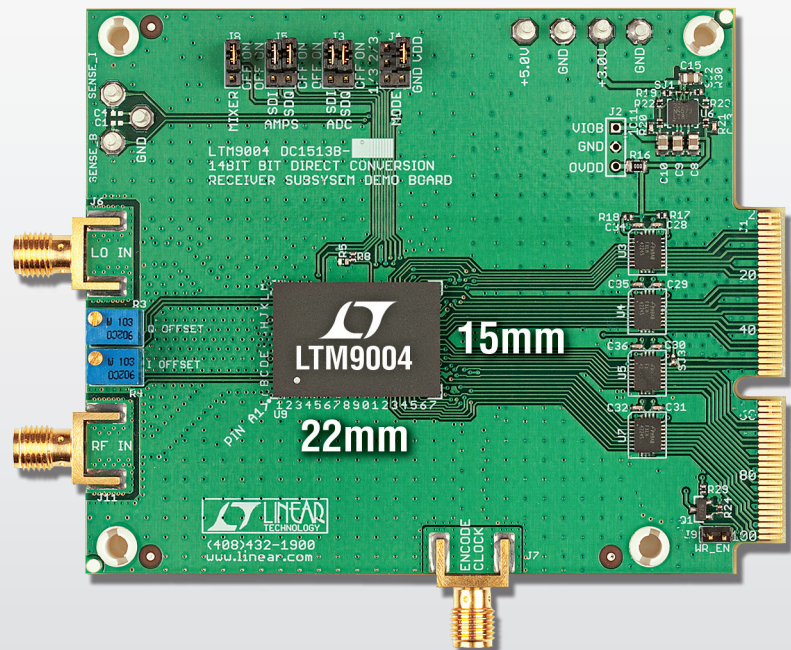
IF Sampling

The LTM<sup>®</sup>9004 (Direct Conversion) and LTM9005 (IF Sampling)  $\mu$ Module<sup>®</sup> receivers offer unprecedented integration for more compact, low power designs and dramatically faster time-to-market. Integrating the RF, signal filtering, gain stages and high-speed ADCs, these receivers eliminate time-consuming design, layout and component sourcing associated with high performance communication systems. With no performance compromise, they enable dense, multichannel macrocells or compact remote radio heads.

LTM9004 Demo Board

## Features

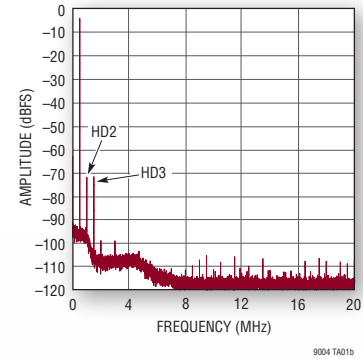
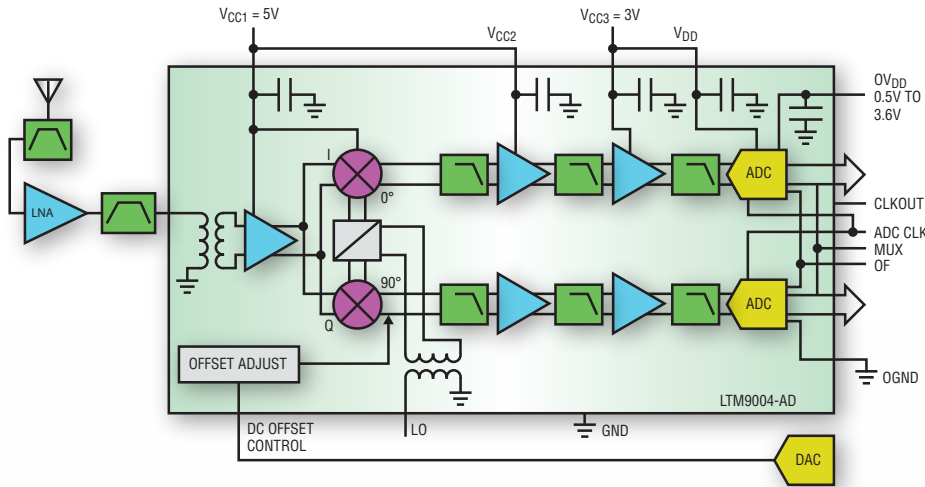
- Fully Integrated RF-to-Digital Receivers
- 14-Bit, 125MSPS Low Power ADC
- Direct Conversion Architecture (LTM9004)
  - 700MHz to 2.7GHz RF Input Range
  - I/Q Demodulation & Dual ADC
  - 5V & 3V Supplies, 1.8W Total
- IF-Sampling Architecture (LTM9005)
  - 400MHz to 3.8GHz RF Input Range
  - 20MHz SAW Filter, 140MHz IF
  - 3.3V Supply, 1.3W Total
- 22mm x 15mm LGA Package



LT, LT, LTC, LTM,  $\mu$ Module, Linear Technology and the Linear logo are registered trademarks of Linear Technology Corporation. All other trademarks are the property of their respective owners.

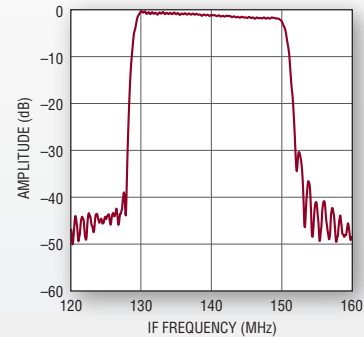
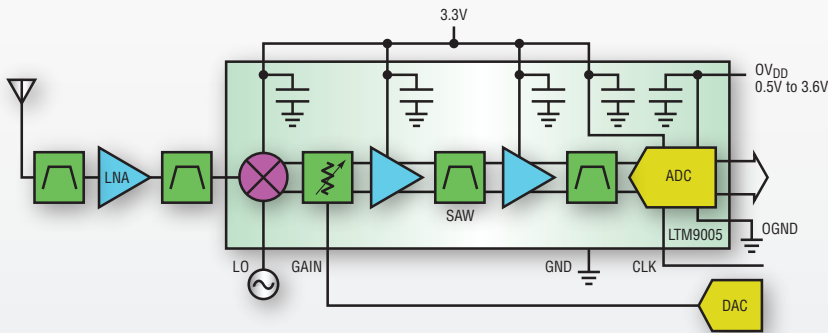
[www.BD11C.com/Linear](http://www.BD11C.com/Linear)

## LTM9004 Block Diagram and Performance



OPTION	FILTER CUTOFF	SIGNAL BANDWIDTH
LTM9004-AA	1.92MHz	3.84MHz (1-Carrier WCDMA)
LTM9004-AB	4.42MHz	8.84MHz (2-Carrier WCDMA)
LTM9004-AC	9.42MHz	18.84MHz (4-Carrier WCDMA)
LTM9004-AD	20MHz	40MHz

## LTM9005 Block Diagram and Performance



OPTION	FILTER CENTER	SIGNAL BANDWIDTH
LTM9005-AA	140MHz	16MHz
LTM9005-AB	140MHz	20MHz

### µModule Receiver Features

- Ease of Use, Faster Time-to-Market
- Eliminates Most Challenges of Driving High Speed ADCs
- Integrates Key Components
- Simplifies Layout without Sacrificing Performance
- Provides System-Level Testing
- Dramatically Smaller and Simpler than Discrete Implementations
- Proven LTC Quality, Reliability and Service
- ECCN 5A991 - No Export License Required

### Semi-Custom Options

The LTM9004 and LTM9005 are available in semi-custom options, subject to business approval. Changes are limited to filter configurations and the ADC speed and resolution where pin-compatible alternatives are available. Contact Linear Technology for details.